



Missouri Department of

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NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

SEP 07 2018

The Honorable Michael L. Parson
Governor of Missouri
201 West Capitol Avenue, Room 216
Jefferson City, MO 65101

Dear Governor Parson:

Pursuant to Section 644.145.1 of the Revised Statutes of Missouri, the Missouri Department of Natural Resources completed 160 analyses of affordability in 2017 for those actions (e.g. permits or enforcement actions) that imposed new requirements on publicly owned waste water collection or treatment systems. The enclosed report summarizes the results of those analyses.

The report includes a brief narrative and tables listing each action and key statistical data as required by statute. The Department appreciates your review of this information and is available to answer any questions you might have.

Sincerely,

Carol S. Comer
Director

CSC/hfs

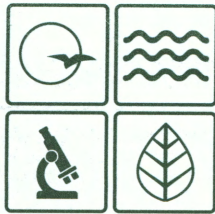
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General Information

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NATURAL RESOURCES
Michael L. Parson, Governor Carol S. Comer, Director

SEP 07 2018

The Honorable Sonya Anderson, Chair
Committee on Conservation and Natural Resources
Missouri House of Representatives
201 West Capitol Avenue, Room 234
Jefferson City, MO 65101

Dear Representative Anderson:

Pursuant to Section 644.145.1 of the Revised Statutes of Missouri, the Missouri Department of Natural Resources completed 160 analyses of affordability in 2017 for those actions (e.g. permits or enforcement actions) that imposed new requirements on publicly owned waste water collection or treatment systems. The enclosed report summarizes the results of those analyses.

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Sincerely,

Carol S. Comer
Director

CSC/hls

c: Mr. Rich Germinder



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NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

SEP 07 2018

The Honorable Todd Richardson
Speaker of Missouri House of Representatives
201 West Capitol Avenue, Room 308
Jefferson City, MO 65101

Dear Representative Richardson:

Pursuant to Section 644.145.1 of the Revised Statutes of Missouri, the Missouri Department of Natural Resources completed 160 analyses of affordability in 2017 for those actions (e.g. permits or enforcement actions) that imposed new requirements on publicly owned waste water collection or treatment systems. The enclosed report summarizes the results of those analyses.

The report includes a brief narrative and tables listing each action and key statistical data as required by statute. The Department appreciates your review of this information and is available to answer any questions you might have.

Sincerely,

Carol S. Comer
Director

CSC/hls

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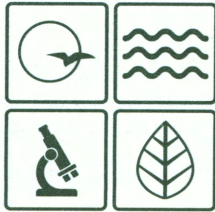
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NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

SEP 07 2018

The Honorable Brian Munzlinger, Chair
Committee on Agriculture, Food Production and
Outdoor Resources, Missouri Senate
201 West Capitol Avenue, Room 319
Jefferson City, MO 65101

Dear Senator Munzlinger:

Pursuant to Section 644.145.1 of the Revised Statutes of Missouri, the Missouri Department of Natural Resources completed 160 analyses of affordability in 2017 for those actions (e.g. permits or enforcement actions) that imposed new requirements on publicly owned waste water collection or treatment systems. The enclosed report summarizes the results of those analyses.

The report includes a brief narrative and tables listing each action and key statistical data as required by statute. The Department appreciates your review of this information and is available to answer any questions you might have.

Sincerely,

Carol S. Comer
Director

CSC/hls

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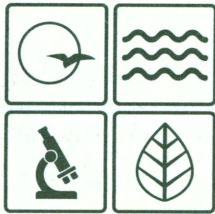


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NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

SEP 07 2018

The Honorable Ron Richard
President Pro Tempore, Missouri Senate
201 West Capitol Avenue, Room 321
Jefferson City, MO 65101

Dear Senator Richard:

Pursuant to Section 644.145.1 of the Revised Statutes of Missouri, the Missouri Department of Natural Resources completed 160 analyses of affordability in 2017 for those actions (e.g. permits or enforcement actions) that imposed new requirements on publicly owned waste water collection or treatment systems. The enclosed report summarizes the results of those analyses.

The report includes a brief narrative and tables listing each action and key statistical data as required by statute. The Department appreciates your review of this information and is available to answer any questions you might have.

Sincerely,

Carol S. Comer
Director

CSC/hls

c: Mr. Rich Germinder



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GENERAL STAFF



1979-01-20

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of the Ministry of Defense
of the Soviet Union

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2. The General Staff is responsible for the development and implementation of the military strategy of the Soviet Union.

General Staff
of the Ministry of Defense
of the Soviet Union



Missouri Department of dnr.mo.gov
NATURAL RESOURCES
Michael L. Parson, Governor Carol S. Comer, Director

SEP 07 2018

The Honorable Ryan Silvey, Chair
Committee on Commerce, Consumer Protection
Energy and the Environment, Missouri Senate
201 West Capitol Avenue, Room 429
Jefferson City, MO 65101

Dear Senator Silvey:

Pursuant to Section 644.145.1 of the Revised Statutes of Missouri, the Missouri Department of Natural Resources completed 160 analyses of affordability in 2017 for those actions (e.g. permits or enforcement actions) that imposed new requirements on publicly owned waste water collection or treatment systems. The enclosed report summarizes the results of those analyses.

The report includes a brief narrative and tables listing each action and key statistical data as required by statute. The Department appreciates your review of this information and is available to answer any questions you might have.

Sincerely,

Carol S. Comer
Director

CSC/hls

c: Mr. Rich Germinder



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**Annual Report on Affordability Findings of Compliance to the Missouri Clean Water Law
Calendar Year 2017**

**Prepared by Missouri Department of Natural Resources
Water Protection Program**

The General Assembly enacted Section 644.145 of the Revised Statutes of Missouri (RSMo), in 2011 to ensure that the Department of Natural Resources (Department) considers affordability when incorporating new requirements into permits for publicly owned sewer systems or water or sewer treatment works, or when enforcing provisions of Chapter 644 or the Federal Water Pollution Control Act. This report presents the affordability findings conducted in calendar year 2017 for department permit taken or anticipated during that time period.

Under this statute, affordability with respect to payment of a utility bill is “a measure of whether an individual customer or household with an income equal to or lower than the median household income for their community can pay the bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household,” taking into consideration the criteria described in the statute.

Number of Findings of Affordability

The Department issued 160 findings of affordability, with effective dates in calendar year 2017. All 160 findings were categorized as affordable. None of the changes were implemented as a federal mandate. The Department works with permittees before issuing any final permit whenever the risk of an unaffordable action is high, to mitigate the permit changes where possible to avoid creating an unaffordable situation. These mitigation efforts can include such actions as temporary variances, revised compliance schedules, and the reevaluation of financing options.

Findings Resulting in Higher Than Normal Median Household Income (MHI)

Missouri’s statute does establish a specific threshold for affordability relative to median household income (MHI), although MHI is commonly regarded as an indicator of potential affordability concerns. Of the 160 actions requiring affordability findings in 2017, ten actions resulted in projected monthly sewer rates per user greater than 2% of MHI. Of those ten actions, seven were minor, resulting in monthly increases of \$.09 or less. Of the remaining three -

- Curryville’s permit action requires compliance with water quality standards for bacteria and resulted in an estimated \$10.54 increase in projected monthly sewer rate to \$74.54, however this was deemed “affordable” for the term of the permit as the actual cost of upgrades is anticipated to be substantially less than the cost identified in the affordability analysis. This is due to the fact that the cost identified in CAPDEWORKS are known to significantly overestimate the cost of disinfection for flows less than 100,000 gallons per day and that the proposed upgrades will be for a facility with flows of 25,500 gallons per day verses the evaluated 76,000 gallons per day. Since this permit was issued the department has developed a cost projection spreadsheet for facilities with flows less than 100,000 gallons per day which provides more accurate projections. In drafting this report the department has conducted an additional analysis for Curryville’s new requirement using the new cost projection tool and found that the resulting monthly sewer rate would be \$68.57. This represents an increase in the monthly sewer rate of \$4.57 or 0.16% of the MHI. The department is committed to reevaluating these costs, assumptions, and the affordability determination during the permit renewal process.

- Livonia's permit action resulted in an estimated \$2.81 increase in the projected monthly sewer rate to \$35.56, however this was deemed "affordable" for this permit term because this sewer rate is based on the assumption that the facility will have to spend significant resources to upgrade. It appears likely that the facility will not have to upgrade after all, although the affordability analysis assumes this as a worst-case scenario. Based on reports submitted by Livonia to the department, the system has greatly improved its operational controls, particularly in the area of wastewater retention time such that the system has not discharged in several years. In comparison to some other systems that utilized similar retention times prior to discharge, it appears likely that Livonia's system will provide sufficient treatment that it will meet the effluent limitations of the new permit that triggered the affordability analysis. The department is committed to reevaluating these costs and assumptions during the permit renewal process.
- Breckenridge's permit action resulted in an estimated \$3.01 increase in projected monthly sewer rate to \$43.01, however this was deemed "affordable" for this permit term because there is a wide range of projected costs for the upgrade to land application, final effluent limitations for ammonia were established in the previous permit and that the Department was not provided with any information regarding the City's existing debt or operating costs. To address the potential burden, the Department has provided an extension of the existing schedule of compliance by another five years to allow opportunity to evaluate additional mitigating paths such as the multiple discharger variance for ammonia. The department is committed to reevaluating these costs and assumptions during the future permit renewal process.

Average Increase in Sewer Rates

For the 160 findings, the projected increases in monthly sewer rates in terms of 2016 dollar values ranged between \$0.00 and \$38.64, with an average of \$6.32. The projected percent increases in monthly sewer rates ranged between 0.0% and 270.9%, with an average of 33.0%.

Average Increase in Sewer Rates as Percentages of MHI

For the 160 findings, the projected increases in monthly sewer rates as percentages of monthly MHI of the respective communities were ranged between 0.000% and 1.117%, with an average of 0.186%. The communities included counties, cities, villages, towns and census designated places in which the service users were residing.

List of All the Permit Holders Receiving Affordability Findings

All permits holders receiving findings in 2017 are provided in Table 1 along with data, including the following that are required by statute:

- a) Current and projected monthly residential sewer rates in dollars;
- b) Projected monthly residential sewer rates as percentages of monthly median household incomes; and
- c) Percentages of households at or below the state poverty rate.

All footnotes are denoted within Table 1 in the format of an asterisk and a number, that is, "*1" through "*18" and corresponding elaborations are presented at the end of Table 1.

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017

(This table is arranged in descending order of the values for the indicator “projected monthly sewer rate per user as a percentage of monthly MHI of the respective community” as presented in the column with the highlighted heading of “Projected Monthly Sewer Rate Per User: % of Monthly MHI.”)

| RSMo 644.145.9 Criteria | | | | | | | | | | | | | | | |
|-------------------------|------------|------------------------------|-----------------------------------|------------------|----------------------------------|----------------------------------|---|----------|---------------------------|--|---------------|------------------------|------------|---|---------------------|
| | | | | | | | | | | | | | | Federal Mandate | 0 |
| | | | | | | | | | | | | | | Not Affordable | 0 |
| | | | | | | | | | | Average *1 | Average *2 | Average *3 | Affordable | | |
| | | | | | | | | | | \$6.32 | 33.0% | 0.186% | 160 | | |
| No. *4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | | | Increase of Monthly Sewer Rate Per User | | | | House- holds at or Below Poverty | Affordability *8 |
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | | |
| *9, *10 | | | | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | | | |
| 001 | MO-0040801 | Curryville WWTF | UD | \$33,249 | 90 | \$949 | \$64.00 | \$74.54 | 2.69% | \$10.54 | 16.5% | 0.380% | *18 | 33.8% | Yes |
| 002 | MO-0026646 | Unionville South WWTF | UM | \$27,286 | 869 | \$0 | \$56.00 | \$39.11 | 2.46% | \$0.00 | 0.0% | 0.000% | *16 | 28.3% | Yes |
| 003 | MO-0054569 | Unionville North WWTF | UM | \$27,286 | 869 | \$0 | \$56.00 | \$39.11 | 2.46% | \$0.00 | 0.0% | 0.000% | *16 | 28.3% | Yes |
| 004 | MO-0136051 | Country Club WWTF | S | \$71,461 | 530 | \$388 | \$140.16 | \$140.22 | 2.35% | \$0.06 | 0.0% | 0.001% | *18 | 7.0% | Yes |
| 005 | MO-0134821 | GASD, Gravois Arm WWTP #2 | S | \$32,843 | 967 | \$388 | \$63.00 | \$63.03 | 2.30% | \$0.03 | 0.1% | 0.001% | *18 | 58.8% | Yes |
| 006 | MO-0121916 | Livonia WWTF | UL | \$18,909 | 44 | \$124 | \$32.75 | \$35.56 | 2.26% | \$2.81 | 8.6% | 0.178% | *18 | 35.4% | Yes |
| 007 | MO-0050610 | Mansfield WWTF | S | \$18,676 | 650 | \$388 | \$34.50 | \$34.55 | 2.22% | \$0.05 | 0.1% | 0.003% | *18 | 36.1% | Yes |
| 008 | MO-0093891 | Breckenridge WWTF | UL | \$23,479 | 231 | \$695 | \$40.00 | \$43.01 | 2.20% | \$3.01 | 7.5% | 0.154% | *18 | 20.6% | Yes |
| 009 | MO-0044954 | Fayette WWTF | S | \$33,520 | 1,051 | \$388 | \$59.70 | \$59.73 | 2.14% | \$0.03 | 0.1% | 0.001% | *18 | 24.9% | Yes |
| 010 | MO-0093548 | Osceola WWTF | S | \$23,404 | 370 | \$388 | \$40.00 | \$40.09 | 2.06% | \$0.09 | 0.2% | 0.004% | *18 | 27.4% | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

| No. #4 | Permit No. | Facility Name #5 | Pollution Control Option #6 | Annual MHI #7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | Households at or Below Poverty | Affordability #8 | |
|--------|------------|-------------------------------------|-----------------------------|---------------|-------------------------|----------------------------|-------------------------------------|---------------------------------------|---------------------|---|--------|---------------------|--------------------------------|------------------|-----|
| | | | | | | | \$ | \$ | % of Monthly MHI #7 | \$ | % | % of Monthly MHI #7 | | | |
| 011 | MO-0093068 | Pilot Grove West WWTF | UL | \$36,278 | 160 | \$0 | \$58.75 | \$35.47 | 1.94% | \$0.00 | 0.0% | 0.000% | *16 | 17.8% | Yes |
| 012 | MO-0106348 | Russellville WWTF | UM | \$49,017 | 313 | \$6,075 | \$57.35 | \$76.76 | 1.88% | \$19.41 | 33.8% | 0.475% | *11 | 18.1% | Yes |
| 013 | MO-0040002 | El Dorado Springs WWTP | S | \$19,928 | 2,101 | \$1,200 | \$30.89 | \$30.94 | 1.86% | \$0.05 | 0.2% | 0.003% | *17 | 45.7% | Yes |
| 014 | MO-0092517 | Rich Hill WWTF | UD | \$31,043 | 714 | \$2,892 | \$44.00 | \$48.05 | 1.86% | \$4.05 | 9.2% | 0.157% | | 28.1% | Yes |
| 015 | MO-0120570 | Lewistown WWTF | UL | \$36,838 | 252 | \$3,087 | \$44.00 | \$56.25 | 1.83% | \$12.25 | 27.8% | 0.399% | | 9.8% | Yes |
| 016 | MO-0092932 | Laclede WWTF | UL | \$38,827 | 159 | \$5,746 | \$22.00 | \$58.14 | 1.80% | \$36.14 | 164.3% | 1.117% | | 6.7% | Yes |
| 017 | MO-0118010 | Jameson WWTF | UL | \$32,918 | 54 | \$0 | \$49.00 | \$46.20 | 1.79% | \$0.00 | 0.0% | 0.000% | *16 | 6.0% | Yes |
| 018 | MO-0137111 | Liberty WWTP | UM | \$47,333 | 9,888 | \$87,311 | \$58.20 | \$67.03 | 1.70% | \$8.83 | 15.2% | 0.224% | | 9.3% | Yes |
| 019 | MO-0114715 | Hume WWTF | UD | \$47,273 | 141 | \$1,231 | \$57.69 | \$66.42 | 1.69% | \$8.73 | 15.1% | 0.222% | | 15.6% | Yes |
| 020 | MO-0123056 | CGCRCSD, Pleasant Lake Estates WWTF | UD | \$53,200 | 44 | \$1,209 | \$46.87 | \$74.35 | 1.68% | \$27.48 | 58.6% | 0.620% | | 13.0% | Yes |
| 021 | MO-0123307 | CGCRCSD, Sun Valley Estates WWTF | UD | \$53,200 | 20 | \$550 | \$46.87 | \$74.35 | 1.68% | \$27.48 | 58.6% | 0.620% | | 13.0% | Yes |
| 022 | MO-0125105 | CGCRCSD, Homestead Place WWTF | UD | \$53,200 | 11 | \$302 | \$46.87 | \$74.35 | 1.68% | \$27.48 | 58.6% | 0.620% | | 13.0% | Yes |
| 023 | MO-0054755 | Hopkins WWTF | UM | \$34,253 | 268 | \$2,305 | \$38.64 | \$47.24 | 1.65% | \$8.60 | 22.3% | 0.301% | | 22.1% | Yes |
| 024 | MO-0113930 | Eagleville WWTF | UL | \$32,857 | 154 | \$0 | \$45.00 | \$33.67 | 1.64% | \$0.00 | 0.0% | 0.000% | *16 | 17.1% | Yes |
| 025 | MO-0117161 | Clarksdale WWTF | UL | \$40,550 | 128 | \$0 | \$55.00 | \$43.14 | 1.63% | \$0.00 | 0.0% | 0.000% | *16 | 14.9% | Yes |
| 026 | MO-0052663 | Clarkton WWTF | S | \$25,717 | 520 | \$400 | \$34.75 | \$34.81 | 1.62% | \$0.06 | 0.2% | 0.003% | | 39.8% | Yes |
| 027 | MO-0096679 | Pineville WWTF | S | \$31,449 | 350 | \$776 | \$41.70 | \$41.88 | 1.60% | \$0.18 | 0.4% | 0.007% | | 15.2% | Yes |
| 028 | MO-0028061 | Braymer WWTF | UM | \$32,356 | 448 | \$12,741 | \$14.40 | \$42.84 | 1.59% | \$28.44 | 197.5% | 1.055% | | 25.3% | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

| No. *4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | | | Projected Monthly Sewer Rate Per User | | | | Households at or Below Poverty | Affordability *8 |
|--------|------------|---------------------------------|-----------------------------|---------------|-------------------------|----------------------------|-------------------------------------|---------|---------------------|---------------------------------------|--------|---------------------|-----|--------------------------------|------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | | |
| 029 | MO-0028690 | Fredericktown WWTP | S | \$26,551 | 2,135 | \$776 | \$34.80 | \$34.83 | 1.57% | \$0.03 | 0.1% | 0.001% | | 25.2% | Yes |
| 030 | MO-0130028 | Ionia WWTF | UL | \$34,037 | 48 | \$456 | \$35.00 | \$44.49 | 1.57% | \$9.49 | 27.1% | 0.335% | | 21.8% | Yes |
| 031 | MO-0127906 | Laurie WWTF | S | \$29,002 | 392 | \$1,908 | \$37.35 | \$37.76 | 1.56% | \$0.41 | 1.1% | 0.017% | *17 | 19.5% | Yes |
| 032 | MO-0127124 | Montgomery Clear Creek WWTP | S | \$36,140 | 1,346 | \$1,588 | \$46.65 | \$46.75 | 1.55% | \$0.10 | 0.2% | 0.003% | *17 | 21.9% | Yes |
| 033 | MO-0039675 | Houston WWTF | S | \$24,437 | 1,099 | \$776 | \$31.39 | \$31.45 | 1.54% | \$0.06 | 0.2% | 0.003% | | 31.1% | Yes |
| 034 | MO-0027600 | Grant City West Sanitary Lagoon | UM | \$38,911 | 409 | \$8,937 | \$27.95 | \$49.80 | 1.54% | \$21.85 | 78.2% | 0.674% | | 21.0% | Yes |
| 035 | MO-0088676 | Winfield WWTF | UM | \$49,164 | 496 | \$8,730 | \$44.60 | \$62.20 | 1.52% | \$17.60 | 39.5% | 0.430% | | 23.9% | Yes |
| 036 | MO-0050296 | New Franklin WWTF | UL | \$33,428 | 540 | \$0 | \$42.25 | \$40.00 | 1.52% | \$0.00 | 0.0% | 0.000% | *16 | 19.4% | Yes |
| 037 | MO-0056626 | Cole Camp WWTF | UC | \$37,721 | 590 | \$2,342 | \$43.65 | \$47.62 | 1.51% | \$3.97 | 9.1% | 0.126% | | 20.3% | Yes |
| 038 | MO-0026301 | Cabool WWTF | UM | \$18,415 | 1,107 | \$11,236 | \$12.71 | \$22.86 | 1.49% | \$10.15 | 79.9% | 0.661% | | 41.3% | Yes |
| 039 | MO-0042480 | Billings WWTP | S | \$36,144 | 440 | \$400 | \$44.77 | \$44.85 | 1.49% | \$0.08 | 0.2% | 0.003% | | 17.7% | Yes |
| 040 | MO-0040738 | Boonville WWTP | S | \$38,233 | 3,039 | \$4,600 | \$47.30 | \$47.43 | 1.49% | \$0.13 | 0.3% | 0.004% | *17 | 25.5% | Yes |
| 041 | MO-0021423 | Gideon WWTF | S | \$30,026 | 450 | \$212 | \$37.20 | \$37.24 | 1.49% | \$0.04 | 0.1% | 0.002% | | 25.9% | Yes |
| 042 | MO-0107581 | Granby WWTF | S | \$36,209 | 904 | \$776 | \$44.60 | \$44.67 | 1.48% | \$0.07 | 0.2% | 0.002% | *17 | 16.1% | Yes |
| 043 | MO-0051608 | Tarkio WWTF | UM | \$35,909 | 684 | \$17,134 | \$19.00 | \$44.05 | 1.47% | \$25.05 | 131.8% | 0.837% | | 20.5% | Yes |
| 044 | MO-0115410 | CCSD, Catawissa WWTF | UM | \$42,559 | 563 | \$6,435 | \$40.00 | \$51.43 | 1.45% | \$11.43 | 28.6% | 0.322% | | 10.8% | Yes |
| 045 | MO-0041068 | Owensville WWTP | S | \$34,787 | 1,330 | \$96 | \$42.00 | \$42.01 | 1.45% | \$0.01 | 0.0% | 0.000% | | 24.0% | Yes |
| 046 | MO-0103390 | Cairo WWTF | UL | \$48,850 | 152 | \$5,873 | \$20.00 | \$58.64 | 1.44% | \$38.64 | 193.2% | 0.949% | | 18.8% | Yes |
| 047 | MO-0030791 | Norborne WWTF | UM | \$41,961 | 330 | \$6,211 | \$31.50 | \$50.32 | 1.44% | \$18.82 | 59.7% | 0.538% | | 12.9% | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

| No. #4 | Permit No. | Facility Name #5 | Pollution Control Option #6 | Annual MHI #7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | Households at or Below Poverty | Affordability #8 | |
|--------|------------|------------------------------|-----------------------------|---------------|-------------------------|----------------------------|-------------------------------------|---------------------------------------|---------------------|---|--------|---------------------|--------------------------------|------------------|-----|
| | | | | | | | \$ | \$ | % of Monthly MHI #7 | \$ | % | % of Monthly MHI #7 | | | |
| 048 | MO-0106496 | Centerview WWTF | UL | \$32,292 | 117 | \$1,308 | \$26.49 | \$37.67 | 1.40% | \$11.18 | 42.2% | 0.415% | | 14.5% | Yes |
| 049 | MO-0026310 | Mountain View WWTF | S | \$22,917 | 1,209 | \$548 | \$26.50 | \$26.54 | 1.39% | \$0.04 | 0.1% | 0.002% | | 30.2% | Yes |
| 050 | MO-0023221 | Macon WWTP | S | \$35,580 | 2,565 | \$6,810 | \$40.91 | \$41.13 | 1.39% | \$0.22 | 0.5% | 0.007% | | 20.1% | Yes |
| 051 | MO-0094137 | Reeds Spring WWTP | S | \$33,616 | 429 | \$1,526 | \$38.50 | \$38.80 | 1.38% | \$0.30 | 0.8% | 0.011% | | 15.6% | Yes |
| 052 | MO-0097527 | Jacksonville WWTF | UL | \$43,491 | 63 | *15 | *15 | \$49.22 | 1.36% | *15 | *15 | *15 | | 17.6% | Yes |
| 053 | MO-0022381 | Mount Vernon WWTP | S | \$34,356 | 1,921 | \$3,394 | \$38.72 | \$38.87 | 1.36% | \$0.15 | 0.4% | 0.005% | *17 | 16.2% | Yes |
| 054 | MO-0026336 | Savannah WWTF | UD | \$43,062 | 1,917 | \$29,196 | \$33.38 | \$48.61 | 1.35% | \$15.23 | 45.6% | 0.424% | | 11.0% | Yes |
| 055 | MO-0117412 | Belton WWTP | S | \$54,862 | 7,810 | \$5,386 | \$60.91 | \$60.97 | 1.33% | \$0.06 | 0.1% | 0.001% | | 14.7% | Yes |
| 056 | MO-0108081 | La Monte SE WWTF | UM | \$43,653 | 312 | \$9,475 | \$18.00 | \$48.37 | 1.33% | \$30.37 | 168.7% | 0.835% | | 19.1% | Yes |
| 057 | MO-0108090 | La Monte NW WWTF | UM | \$43,653 | 312 | \$9,475 | \$18.00 | \$48.37 | 1.33% | \$30.37 | 168.7% | 0.835% | | 19.1% | Yes |
| 058 | MO-0048666 | Senath WWTF | S | \$27,775 | 694 | \$800 | \$30.50 | \$30.60 | 1.32% | \$0.10 | 0.3% | 0.004% | | 35.0% | Yes |
| 059 | MO-0048097 | Alma Sewage Treatment Lagoon | UL | \$44,483 | 217 | \$7,107 | \$16.00 | \$48.75 | 1.32% | \$32.75 | 204.7% | 0.883% | | 5.5% | Yes |
| 060 | MO-0126349 | Advance WWTF | UM | \$34,715 | 630 | \$13,173 | \$16.41 | \$37.32 | 1.29% | \$20.91 | 127.4% | 0.723% | | 14.7% | Yes |
| 061 | MO-0106810 | Holts Summit WWTP | UD | \$45,094 | 1,738 | \$5,058 | \$45.46 | \$48.37 | 1.29% | \$2.91 | 6.4% | 0.077% | | 13.2% | Yes |
| 062 | MO-0126179 | Harrisonville S WWTF | UD | \$41,546 | 4,113 | \$27,886 | \$37.65 | \$44.43 | 1.28% | \$6.78 | 18.0% | 0.196% | | 14.3% | Yes |
| 063 | MO-0032883 | Marshall SE WWTP | S | \$37,675 | 4,820 | \$1,086 | \$40.25 | \$40.27 | 1.28% | \$0.02 | 0.0% | 0.001% | | 19.9% | Yes |
| 064 | MO-0028070 | Harrisonville WWTF | UD | \$41,546 | 4,113 | \$27,475 | \$37.65 | \$44.33 | 1.28% | \$6.68 | 17.7% | 0.193% | | 14.3% | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

| No. #4 | Permit No. | Facility Name #5 | Pollution Control Option #6 | Annual MHI #7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | | | Projected Monthly Sewer Rate Per User | | | Increase of Monthly Sewer Rate Per User | | | Households at or Below Poverty | Affordability #8 |
|--------|------------|-------------------------------------|-----------------------------|---------------|-------------------------|----------------------------|-------------------------------------|---------|---------------------|---------------------------------------|----------|---------------------|---|---|---------------------|--------------------------------|------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI #7 | \$ | \$ | % of Monthly MHI #7 | \$ | % | % of Monthly MHI #7 | | |
| 065 | MO-0091600 | Sumner WWTF | UL | \$34,037 | 86 | \$1,820 | \$15.00 | \$36.16 | 1.27% | \$21.16 | \$141.1% | 0.746% | | | | 35.8% | Yes |
| 066 | MO-0118591 | Kidder WWTF | UD | \$35,838 | 116 | \$1,232 | \$27.00 | \$37.62 | 1.26% | \$10.62 | \$39.3% | 0.356% | | | | 14.9% | Yes |
| 067 | MO-0094854 | Buffalo WWTP | S | \$35,195 | 1,341 | \$2,008 | \$36.50 | \$36.62 | 1.25% | \$0.12 | \$0.3% | 0.004% | *17 | | | 25.8% | Yes |
| 068 | MO-0099465 | St. Clair WWTF | UD | \$28,805 | 2,225 | \$8,544 | \$25.28 | \$29.12 | 1.21% | \$3.84 | \$15.2% | 0.160% | | | | 29.1% | Yes |
| 069 | MO-0088536 | Wyatt WWTF | UD | \$33,226 | 192 | \$1,254 | \$27.00 | \$33.53 | 1.21% | \$6.53 | \$24.2% | 0.236% | | | | 28.4% | Yes |
| 070 | MO-0025305 | Chaffee WWTF | UM | \$33,272 | 1,208 | \$26,636 | \$11.11 | \$33.16 | 1.20% | \$22.05 | \$198.5% | 0.795% | | | | 21.1% | Yes |
| 071 | MO-0085391 | Hannibal WWTP | S | \$37,799 | 7,700 | \$8,700 | \$37.55 | \$37.64 | 1.20% | \$0.09 | \$0.3% | 0.003% | | | | 18.9% | Yes |
| 072 | MO-0108162 | Rockaway Beach WWTF | S | \$27,254 | 1,751 | \$292 | \$27.00 | \$27.01 | 1.19% | \$0.01 | \$0.1% | 0.001% | | | | 34.1% | Yes |
| 073 | MO-0129470 | SCPSD #1, Box Canyon Watershed WWTF | UM | \$50,465 | 308 | \$1,540 | \$45.00 | \$50.00 | 1.19% | \$5.00 | \$11.1% | 0.119% | | | | 25.4% | Yes |
| 074 | MO-0127370 | Kingdom WWTF | UD | \$39,886 | 93 | \$2,018 | \$17.60 | \$39.30 | 1.18% | \$21.70 | \$123.3% | 0.653% | | | | 17.0% | Yes |
| 075 | MO-0103942 | Walker WWTF | UL | \$32,177 | 99 | \$1,547 | \$16.00 | \$31.63 | 1.18% | \$15.63 | \$97.7% | 0.583% | | | | 26.4% | Yes |
| 076 | MO-0023299 | Richland WWTP | UM | \$27,028 | 870 | \$2,567 | \$23.05 | \$26.00 | 1.15% | \$2.95 | \$12.8% | 0.131% | | | | 30.3% | Yes |
| 077 | MO-0022098 | Republic WWTP | S | \$51,191 | 5,953 | \$4,356 | \$49.08 | \$49.14 | 1.15% | \$0.06 | \$0.1% | 0.001% | | | | 15.8% | Yes |
| 078 | MO-0052132 | Wardell WWTF | S | \$33,686 | 259 | \$400 | \$32.00 | \$32.13 | 1.14% | \$0.13 | \$0.4% | 0.005% | | | | 16.9% | Yes |
| 079 | MO-0111601 | Altamont - Winston WWTF | UL | \$41,286 | 173 | \$2,765 | \$22.50 | \$38.48 | 1.12% | \$15.98 | \$71.0% | 0.464% | | | | 23.0% | Yes |
| 080 | MO-0021466 | Albany WWTF | UM | \$40,340 | 795 | \$0 | \$37.57 | \$37.18 | 1.12% | \$0.00 | \$0.0% | 0.000% | *16 | | | 15.4% | Yes |
| 081 | MO-0101109 | Olympian WWTF | S | \$39,620 | 296 | \$776 | \$35.50 | \$35.72 | 1.08% | \$0.22 | \$0.6% | 0.007% | | | | 28.0% | Yes |
| 082 | MO-0055905 | Warrensburg W WWTP | S | \$40,066 | 3,455 | \$3,565 | \$35.79 | \$35.88 | 1.07% | \$0.09 | \$0.2% | 0.003% | *17 | | | 26.2% | Yes |
| 083 | MO-0094943 | Crocker WWTF | UD | \$38,017 | 476 | \$1,690 | \$30.29 | \$33.84 | 1.07% | \$3.55 | \$11.7% | 0.112% | | | | 25.9% | Yes |
| 084 | MO-0126802 | Amazonia WWTF | UL | \$35,297 | 145 | \$13 | \$31.00 | \$31.09 | 1.06% | \$0.09 | \$0.3% | 0.003% | | | | 17.8% | Yes |
| 085 | MO-0093564 | St. James WWTF | S | \$38,028 | 1,681 | \$2,698 | \$33.16 | \$33.29 | 1.05% | \$0.13 | \$0.4% | 0.004% | | | | 19.2% | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

| No. #4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | | | Projected Monthly Sewer Rate Per User | | | Increase of Monthly Sewer Rate Per User | | | Households at or Below Poverty | Affordability *8 |
|--------|------------|-------------------------------|-----------------------------|---------------|-------------------------|----------------------------|-------------------------------------|---------|---------------------|---------------------------------------|--------|--------|---|-------|-----|--------------------------------|------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | \$ | % | % of Monthly MHI *7 | \$ | % | | |
| 086 | MO-0040142 | Pevely WWTP | S | \$41,322 | 1,407 | \$3,078 | \$35.87 | \$36.05 | 1.05% | \$0.18 | 0.5% | 0.005% | *17 | 25.0% | Yes | | |
| 087 | MO-0099856 | Osborn WWTF | UM | \$49,944 | 188 | \$0 | \$43.10 | \$37.88 | 1.04% | \$0.00 | 0.0% | 0.000% | *16 | 6.0% | Yes | | |
| 088 | MO-0115401 | CCSD, Robertsville WWTF | S | \$48,892 | 117 | \$1,638 | \$40.00 | \$41.17 | 1.01% | \$1.17 | 2.9% | 0.029% | | 11.9% | Yes | | |
| 089 | MO-0119997 | Branson West Aunts Creek WWTF | S | \$45,803 | 229 | \$720 | \$38.04 | \$38.30 | 1.00% | \$0.26 | 0.7% | 0.007% | | 7.8% | Yes | | |
| 090 | MO-0094935 | Qulin WWTF | S | \$32,776 | 212 | \$280 | \$27.00 | \$27.11 | 0.99% | \$0.11 | 0.4% | 0.004% | | 18.7% | Yes | | |
| 091 | MO-0048194 | Burlington Junction WWTF | UM | \$42,419 | 241 | \$5,227 | \$13.00 | \$34.69 | 0.98% | \$21.69 | 166.8% | 0.614% | *11 | 14.4% | Yes | | |
| 092 | MO-0099678 | Blackburn WWTF | UL | \$49,164 | 124 | \$804 | \$33.43 | \$39.91 | 0.97% | \$6.48 | 19.4% | 0.158% | | 8.4% | Yes | | |
| 093 | MO-0052159 | Ste. Genevieve WWTF | S | \$38,005 | 1,928 | \$800 | \$30.25 | \$30.28 | 0.96% | \$0.03 | 0.1% | 0.001% | | 18.8% | Yes | | |
| 094 | MO-0028568 | Kennett WWTF | UM | \$31,938 | 4,534 | \$44,116 | \$15.23 | \$24.96 | 0.94% | \$9.73 | 63.9% | 0.366% | *11 | 25.4% | Yes | | |
| 095 | MO-0054089 | Hughesville Wastewater Lagoon | UL | \$50,961 | 78 | \$2,261 | \$10.70 | \$39.69 | 0.93% | \$28.99 | 270.9% | 0.683% | | 19.5% | Yes | | |
| 096 | MO-0126195 | Morley WWTF | UL | \$42,546 | 333 | \$0 | \$33.00 | \$23.08 | 0.93% | \$0.00 | 0.0% | 0.000% | *16 | 30.9% | Yes | | |
| 097 | MO-0045837 | Liberal WWTF | UM | \$33,304 | 359 | \$4,240 | \$13.60 | \$25.41 | 0.92% | \$11.81 | 86.8% | 0.426% | | 12.4% | Yes | | |
| 098 | MO-0022918 | Orrick WWTF | UL | \$55,215 | 380 | \$10,093 | \$15.50 | \$42.06 | 0.91% | \$26.56 | 171.4% | 0.577% | | 6.9% | Yes | | |
| 099 | MO-0130371 | Oak Grove WWTF | S | \$49,886 | 2,781 | \$3,002 | \$37.80 | \$37.89 | 0.91% | \$0.09 | 0.2% | 0.002% | | 11.0% | Yes | | |
| 100 | MO-0104027 | Sparta WWTF | S | \$37,422 | 804 | \$292 | \$28.15 | \$28.18 | 0.90% | \$0.03 | 0.1% | 0.001% | | 19.2% | Yes | | |
| 101 | MO-0091723 | Montrose WWTF | UL | \$34,352 | 193 | \$1,324 | \$18.89 | \$25.75 | 0.90% | \$6.86 | 36.3% | 0.240% | | 22.5% | Yes | | |
| 102 | MO-0129046 | Hillsboro N WWTF | UL | \$49,537 | 304 | \$0 | \$36.47 | \$20.46 | 0.88% | \$0.00 | 0.0% | 0.000% | *16 | 14.0% | Yes | | |
| 103 | MO-0080594 | Bell WWTF | UL | \$33,827 | 214 | \$2,014 | \$15.30 | \$24.71 | 0.88% | \$9.41 | 61.5% | 0.334% | | 27.9% | Yes | | |

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| No. *4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | | House- holds at or Below Poverty | Affordability *8 |
|-----------|------------|-----------------------------------|-----------------------------------|------------------|----------------------------------|----------------------------------|---|---|-------|--|--------|--------|------------------------|---|------------------|
| | | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | |
| 104 | MO-0027111 | Herculaneum WWTP | S | \$49,078 | 1,445 | \$6,050 | \$33.46 | \$33.81 | 0.83% | \$0.35 | 1.0% | 0.009% | *17 | 3.0% | Yes |
| 105 | MO-0114910 | FCLCWSO, Labadie WWTF | S | \$53,560 | 254 | \$1,690 | \$36.00 | \$36.55 | 0.82% | \$0.55 | 1.5% | 0.012% | | 11.9% | Yes |
| 106 | MO-0094188 | Tipton WWTF | S | \$48,187 | 938 | \$776 | \$32.45 | \$32.52 | 0.81% | \$0.07 | 0.2% | 0.002% | *17 | 14.3% | Yes |
| 107 | MO-0124664 | Lohman WWTP | S | \$60,089 | 75 | \$456 | \$39.00 | \$39.51 | 0.79% | \$0.51 | 1.3% | 0.010% | | 6.2% | Yes |
| 108 | MO-0104906 | Neosho WWTP | UM | \$36,422 | 4,378 | \$4,684 | \$22.83 | \$23.90 | 0.79% | \$1.07 | 4.7% | 0.035% | | 20.2% | Yes |
| 109 | MO-0108227 | Chillicothe WWTF | S | \$38,116 | 3,867 | \$310 | \$24.25 | \$24.26 | 0.76% | \$0.01 | 0.0% | 0.000% | | 20.0% | Yes |
| 110 | MO-0040843 | Marshfield WWTF | S | \$36,787 | 2,742 | \$1,154 | \$22.98 | \$23.02 | 0.75% | \$0.04 | 0.2% | 0.001% | | 20.8% | Yes |
| 111 | MO-0108863 | Gasconade WWTP | S | \$34,457 | 106 | \$456 | \$21.00 | \$21.36 | 0.74% | \$0.36 | 1.7% | 0.012% | *17 | 10.9% | Yes |
| 112 | MO-0025194 | Concordia Southeast WWTF | UM | \$51,465 | 1,061 | \$22,674 | \$10.53 | \$31.90 | 0.74% | \$21.37 | 202.9% | 0.498% | | 13.1% | Yes |
| 113 | MO-0116041 | Hollister WWTF | S | \$27,295 | 1,498 | \$3,110 | \$16.15 | \$16.32 | 0.72% | \$0.17 | 1.1% | 0.008% | | 28.3% | Yes |
| 114 | MO-0097837 | Columbia WWTF | UI | \$44,749 | 47,229 | \$0 | \$26.18 | \$26.18 | 0.70% | \$0.00 | 0.0% | 0.000% | *11 | 24.5% | Yes |
| 115 | MO-0136034 | Columbia Water Treatment Plant | S | \$44,840 | 48,000 | \$1,292 | \$26.17 | \$26.17 | 0.70% | \$0.00 | 0.0% | 0.000% | *17 | 24.5% | Yes |
| 116 | MO-0054518 | Sweet Springs WWTF | UM | \$38,401 | 584 | \$0 | \$21.50 | \$19.86 | 0.67% | \$0.00 | 0.0% | 0.000% | *16 | 14.6% | Yes |
| 117 | MO-0054585 | Clark WWTF | UL | \$54,415 | 124 | \$2,076 | \$13.50 | \$30.24 | 0.67% | \$16.74 | 124.0% | 0.369% | | 6.8% | Yes |
| 118 | MO-0112925 | St. Robert WWTF | S | \$47,244 | 3,065 | \$12,698 | \$24.94 | \$25.29 | 0.64% | \$0.35 | 1.4% | 0.009% | *17 | 22.7% | Yes |
| 119 | MO-0106461 | RCPSD, Kimmswick WWTP | S | \$55,818 | 11,846 | \$1,736 | \$28.97 | \$28.98 | 0.62% | \$0.01 | 0.0% | 0.000% | | 10.9% | Yes |
| 120 | MO-0030805 | Plattsburg WWTP | S | \$48,663 | 962 | \$920 | \$24.68 | \$24.76 | 0.61% | \$0.08 | 0.3% | 0.002% | *17 | 12.2% | Yes |

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| No. *4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | | House- holds at or Below Poverty | Affordability *8 |
|-----------|------------|--|-----------------------------------|------------------|----------------------------------|----------------------------------|---|---|---------------------------|--|-------|------------------------|-----|---|---------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | | |
| 121 | MO-0103560 | Park Hills Mineral Belt WWTP | S | \$35,646 | 5,039 | \$6,566 | \$16.35 | \$16.46 | 0.55% | \$0.11 | 0.7% | 0.004% | *17 | 26.6% | Yes |
| 122 | MO-0025186 | Carl Junction WWTF | S | \$55,719 | 3,302 | \$3,330 | \$24.81 | \$24.89 | 0.54% | \$0.08 | 0.3% | 0.002% | | 10.8% | Yes |
| 123 | MO-0115118 | Kelso WWTF | UL | \$49,587 | 271 | *15 | *15 | \$19.30 | 0.47% | *15 | *15 | *15 | | 9.2% | Yes |
| 124 | MO-0025275 | Portageville WWTF | UD | \$33,500 | 1,457 | \$4,779 | \$9.59 | \$12.87 | 0.46% | \$3.28 | 34.2% | 0.117% | | 27.3% | Yes |
| 125 | MO-0098094 | Buckner WWTP | S | \$47,333 | 1,011 | \$400 | \$17.37 | \$17.40 | 0.44% | \$0.03 | 0.2% | 0.001% | *17 | 11.3% | Yes |
| 126 | MO-0113085 | Parkville Extended Aeration WWTF | S | \$118,462 | 1,865 | \$800 | \$42.12 | \$42.16 | 0.43% | \$0.04 | 0.1% | 0.000% | *17 | 11.5% | Yes |
| 127 | MO-0044113 | Marthasville WWTF | S | \$58,447 | 500 | \$1,560 | \$18.00 | \$18.26 | 0.37% | \$0.26 | 1.4% | 0.005% | | 6.6% | Yes |
| 128 | MO-0095133 | Miner WWTF | S | \$40,542 | 450 | \$776 | \$9.50 | \$9.64 | 0.29% | \$0.14 | 1.5% | 0.004% | | 12.6% | Yes |
| 129 | MO-0050784 | JCPWSD #3, Hickory Hills South WWTF | C | \$40,964 | 154 | *12 | \$57.00 | *12 | *12 | *12 | *12 | *12 | | 25.3% | Yes |
| 130 | MO-0056651 | CGCRCSD, Seabaugh Acres WWTF | UL | \$52,979 | 33 | *12 | \$35.00 | *12 | *12 | *12 | *12 | *12 | | 13.0% | Yes |
| 131 | MO-0082945 | JCPWSD #3, Hickory Hills North WWTF | C | \$40,964 | 154 | *12 | \$57.00 | *12 | *12 | *12 | *12 | *12 | | 25.3% | Yes |
| 132 | MO-0085472 | Ducket Creek Sanitary District WWTP #1 | S | \$56,735 | 21,393 | \$3,240 | *12 | *12 | *12 | \$0.01 | *12 | 0.000% | | 11.4% | Yes |
| 133 | MO-0098981 | FCLCWSO, Gray Summit WWTF | UL | \$61,172 | 254 | *12 | \$36.00 | *12 | *12 | *12 | *12 | *12 | | 5.0% | Yes |

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| No. *4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | House- holds at or Below Poverty | Affordability *8 |
|-----------|------------|--|-----------------------------------|------------------|----------------------------------|----------------------------------|---|---|---------------------------|--|-----|------------------------|---|------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | |
| 134 | MO-0100749 | Valle Lake Sewer District WWTP | S | \$55,818 | 294 | \$388 | *12 | *12 | *12 | \$0.11 | *12 | 0.002% | 10.9% | Yes |
| 135 | MO-0107476 | Sanitary Sewer District #103 WWTF | UD | \$72,342 | 52 | *12 | \$23.00 | *12 | *12 | *12 | *12 | *12 | 7.6% | Yes |
| 136 | MO-0111716 | PCSD #1, Weeks Hollow WWTF | S | \$47,244 | 3,635 | \$2,776 | *12 | *12 | *12 | \$0.06 | *12 | 0.002% | 22.7% | Yes |
| 137 | MO-0113905 | BRCSD, Riverwood II Estates WWTF | S | \$41,636 | 35 | \$328 | *12 | *12 | *12 | \$0.78 | *12 | 0.023% | 26.9% | Yes |
| 138 | MO-0121363 | SCCPWSD #2, Augusta WWTF | UL | \$50,425 | 162 | *12 | \$31.30 | *12 | *12 | *12 | *12 | *12 | 3.2% | Yes |
| 139 | MO-0128279 | CGCRCSO, Arbor Trails WWTF | S | \$50,516 | 79 | \$128 | *12 | *12 | *12 | \$0.14 | *12 | 0.003% | 9.7% | Yes |
| 140 | MO-0130427 | LCPWSD #3, Hickory Hills WWTP | S | \$31,379 | 315 | \$400 | *12 | *12 | *12 | \$0.11 | *12 | 0.004% | 25.6% | Yes |
| 141 | MO-0130729 | CGCRCSO, Cedar Meadows Subdivision WWTF | S | \$53,200 | 55 | \$164 | *12 | *12 | *12 | \$0.25 | *12 | 0.006% | 13.0% | Yes |
| 142 | MO-0132039 | SCCPWSD #2, Hickory Trails Interim WWTF | S | \$46,333 | 22 | \$348 | *12 | *12 | *12 | \$1.32 | *12 | 0.034% | 18.6% | Yes |
| 143 | MO-0132519 | Washington Co PWSD #4 WWTF | UD | \$35,605 | 111 | *12 | \$45.00 | *12 | *12 | *12 | *12 | *12 | 21.2% | Yes |
| 144 | MO-0053228 | Meadow Heights R-II School District Sewage Lagoon | UL | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |

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| No. *4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | House- holds at or Below Poverty | Affordability *8 |
|-----------|------------|---|-----------------------------------|------------------|----------------------------------|----------------------------------|---|---|---------------------------|--|-----|------------------------|---|---------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | |
| 145 | MO-0053546 | North Wood R-IV School District WWTF | UL | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |
| 146 | MO-0057070 | Nell Holcomb R-IV School WWTP | UL | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |
| 147 | MO-0085588 | Hillview Elementary School WWTF | UL | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |
| 148 | MO-0088927 | Richwoods R-VII School District WWTF | S | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |
| 149 | MO-0098418 | St. Jude Industrial Park WWTF | UD | \$41,600 | 5 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | 20.5% | Yes |
| 150 | MO-0101958 | Jefferson Co Library District WWTF | S | *13 | 4 | \$48 | *13 | *13 | *13 | \$1.00 | *13 | *13 | *13 | Yes |
| 151 | MO-0103241 | Lake of the Ozarks Regional WWTP #1 | S | \$44,110 | 3,550 | \$4,727 | *13 | *13 | *13 | \$0.11 | *13 | 0.003% | 26.1% | Yes |
| 152 | MO-0109878 | St. Joseph Sanitary Landfill | S | \$41,995 | *13 | \$12,362 | *13 | *13 | *13 | *13 | *13 | *13 | 19.5% | Yes |
| 153 | MO-0113743 | RSD, LaSalle Springs Middle School WWTF | S | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |
| 154 | MO-0116611 | Bloomdsdale Elementary School WWTF | UL | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | Yes |
| 155 | MO-0138444 | Scott County Sanitary Landfill | S | \$39,495 | *13 | \$3,460 | *13 | *13 | *13 | *13 | *13 | *13 | 19.6% | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

| No. #4 | Permit No. | Facility Name *5 | Pollution Control Option *6 | Annual MHI *7 | Number of Service Users | Annualized Additional Cost | Current Monthly Sewer Rate Per User | Projected Monthly Sewer Rate Per User | | Increase of Monthly Sewer Rate Per User | | | | Households at or Below Poverty | Affordability *8 |
|--------|------------|--|-----------------------------|---------------|-------------------------|----------------------------|-------------------------------------|---------------------------------------|---------------------|---|-----|---------------------|--|--------------------------------|------------------|
| | | | | | | | \$ | \$ | % of Monthly MHI *7 | \$ | % | % of Monthly MHI *7 | | | |
| 156 | MO-0138819 | ESSD #40, Elkhorn Elementary School WWTF | UL | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | *13 | | *13 | Yes |
| 157 | MO-0037052 | MOARNG, Camp Clark Training Site WWTF | UL | *14 | 65 | *14 | *14 | *14 | *14 | *14 | *14 | *14 | | *14 | Yes |
| 158 | MO-0090581 | MoDOT, I-55 Rest Area-Bloomsdale WWTF | S | *14 | 1 | \$220 | *14 | *14 | *14 | \$18.33 | *14 | *14 | | *14 | Yes |
| 159 | MO-0098281 | MDNR, Meramec State Park WWTF | UL | *14 | 33 | *14 | *14 | *14 | *14 | *14 | *14 | *14 | | *14 | Yes |
| 160 | MO-0123820 | MDC, Lost Valley Fish Hatchery WWTF | S | *14 | 1 | \$106 | *14 | *14 | *14 | \$8.83 | *14 | *14 | | *14 | Yes |

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

Notes

- *1 Average increase of monthly sewer rate per user = “sum of increase of monthly sewer rate per user” / “138 available data points”
- *2 Average increase of monthly sewer rate as a % = “sum of increase of monthly sewer rate as a %” / “126 available data points”
- *3 Average increase of monthly sewer rate as a % of monthly MHI = “sum of increase of monthly sewer rate as a % of monthly MHI” / “135 available data points”
- *4 This table is arranged in descending order of projected monthly sewer rate per user as a percentage of monthly MHI of the respective community.
- *5 Abbreviations used in the facility names include the following.
 BRCS: Blackwater Reorganized Common Sewer District
 CCS: Calvey Creek Sewer District
 CGCRCS: Cape Girardeau County Reorganized Common Sewer District
 ESSD #40: Excelsior Springs School District No. 40
 FCLCWS: Franklin County Labadie Creek Watershed Sewer District
 GAS: Gravois Arm Sewer District
 JCPWS: Johnson County Public Water Sewer District
 LCPWS #3: Laclede County Public Water Supply District No. 3
 MDC: Missouri Department of Conservation
 MDNR: Missouri Department of Natural Resources
 MOARNG: Missouri Army National Guard
 MoDOT: Missouri Department of Transportation
 PCSD #1: Pulaski County Sewer District No. 1
 RCPSD: Rock Creek Public Sewer District
 RSD: Rockwood School District
 SCCPWS #2: St. Charles County Public Water Supply District No. 2
 SCPSD #1: Stone County Public Sewer District No. 1
 WWTF: Wastewater Treatment Facility
 WWTP: Wastewater Treatment Plant
- *6 Abbreviations used in the pollution control options include the following.
 C: closure of facility
 L: landfill
 S: sampling only
 UC: upgrade (collection system)
 UD: upgrade (disinfection only)
 UI: upgrade (integrated management plan)
 UL: upgrade (land application)
 UM: upgrade (mechanical plant)

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

Notes (Cont.)

- *7 MHI: median household income.
- *8 Yes: affordable; No: not affordable; Mandate: federal mandate regardless of affordability.
- *9 For pollution control option as “sampling only”
 $[3] = \text{“sum of ‘sampling cost per sample x annual sampling frequency’ for all sampling parameters”}$
 $[5] = [4] + [7]$
 $[6] = [5] / ([1] / 12)$
 $[7] = [3] / 12 / [2]$
 $[8] = [7] / [4]$
 $[9] = [7] / ([1] / 12)$
- *10 For pollution control option other than “sampling only”
 $[3] = ([7] - [4]) * [2]$
 $[5a] \text{ projected monthly sewer rate for addition of disinfection treatment to current facility}$
 $= \text{“current monthly user rate”} + \text{“new monthly user cost”}$
 $= \text{“current monthly user rate”} + \text{“(annualized capital costs + annual operation and maintenance costs [+ annual sampling costs]) / 12 / number of users”}$
 $[5b] \text{ projected monthly sewer rate for replacement of current facility with mechanical plant or land application}$
 $= \text{“amount of the current annual user rate used towards debt services payment”} + \text{“new monthly user cost”}$
 $= \text{“amount of the current annual user rate used towards debt services payment”} + \text{“(annualized capital costs + annual operation and maintenance costs - current annual user rate [+ annual sampling costs]) / 12 / number of users”}$
 $[6] = [5] / ([1] / 12)$
 $[7] = [5] - [4]$
 $[8] = [7] / [4]$
 $[9] = [7] / ([1] / 12)$
- *11 Analyses included in Abatement Order on Consent documents.
- *12 Not applicable as different sewer districts user specific rate structures and they are generally considered as sufficient to comply with the permits.
- *13 Not applicable as schools, churches, nursing homes, airports, ports, training centers, correctional centers and other institutional facilities do not finance the upgrade, operation, or maintenance of their wastewater treatment facilities based on residential sewer rates.
- *14 Not applicable as federal-owned, state-owned, local government-owned systems do not finance the upgrade, operation, or maintenance of their wastewater treatment facilities based on residential sewer rates.
- *15 Data not available as the permittees did not provide their current user rates, although the Department had made attempts to obtain the information.

Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2017 (Cont.)

Notes (Cont.)

- *16 The projected user rates were lower than the current sewer rates, therefore the current sewer rates were used to assess residential impacts, as it is unlikely the user rates would decrease after upgrading the facilities.
- *17 Current user rates not presented in the permits are included in the Report based on data from “2016 Missouri Public Utility Alliance Water & Wastewater Rate Survey.”
- *18 Projected Monthly Residential Sewer Rate as a percentage of the Monthly Median Household Income exceeds 2%. An affordability threshold for Projected Monthly Residential Sewer Rate as a percentage of the Monthly Median Household Income varies depending on the situation of each individual community. The cost analyses associated with these permits have resulted in findings that the Projected Monthly Residential Sewer Rates will likely be affordable. If additional information is provided in the future that indicate the Projected Monthly Residential Sewer Rates are unaffordable, the Department will modify the analyses and permits accordingly and grant extensions to schedules of compliance to mitigate the impacts on the residents.

Curryville WWTF (MO-0040801, No. 001 in Table 1)

Curryville’s permit action resulted in an estimated \$10.54 increase in projected monthly sewer rate to \$74.54, however this was deemed “affordable” the actual cost of upgrades is anticipated to be substantially less than the cost identified in the affordability analysis. This is due to the fact that the cost identified in CAPDEWORKS are known to be significantly overestimated for flows less than 100,000 gallons per day and that the proposed upgrades will be for a facility with flows of 25,500 gallons per day verses the evaluated 76,000 gallons per day. Since this permit was issued the department has developed a cost projection spreadsheet for facilities with flows less than 100,000 gallons per day which provides more accurate projects more accurate projections. In drafting this report the department has conducted an additional analysis for Curryville’s new requirement using the new cost projection tool and found that the resulting monthly sewer rate would be \$68.57.

Livonia WWTF (MO-0121916, No. 006 in Table 1)

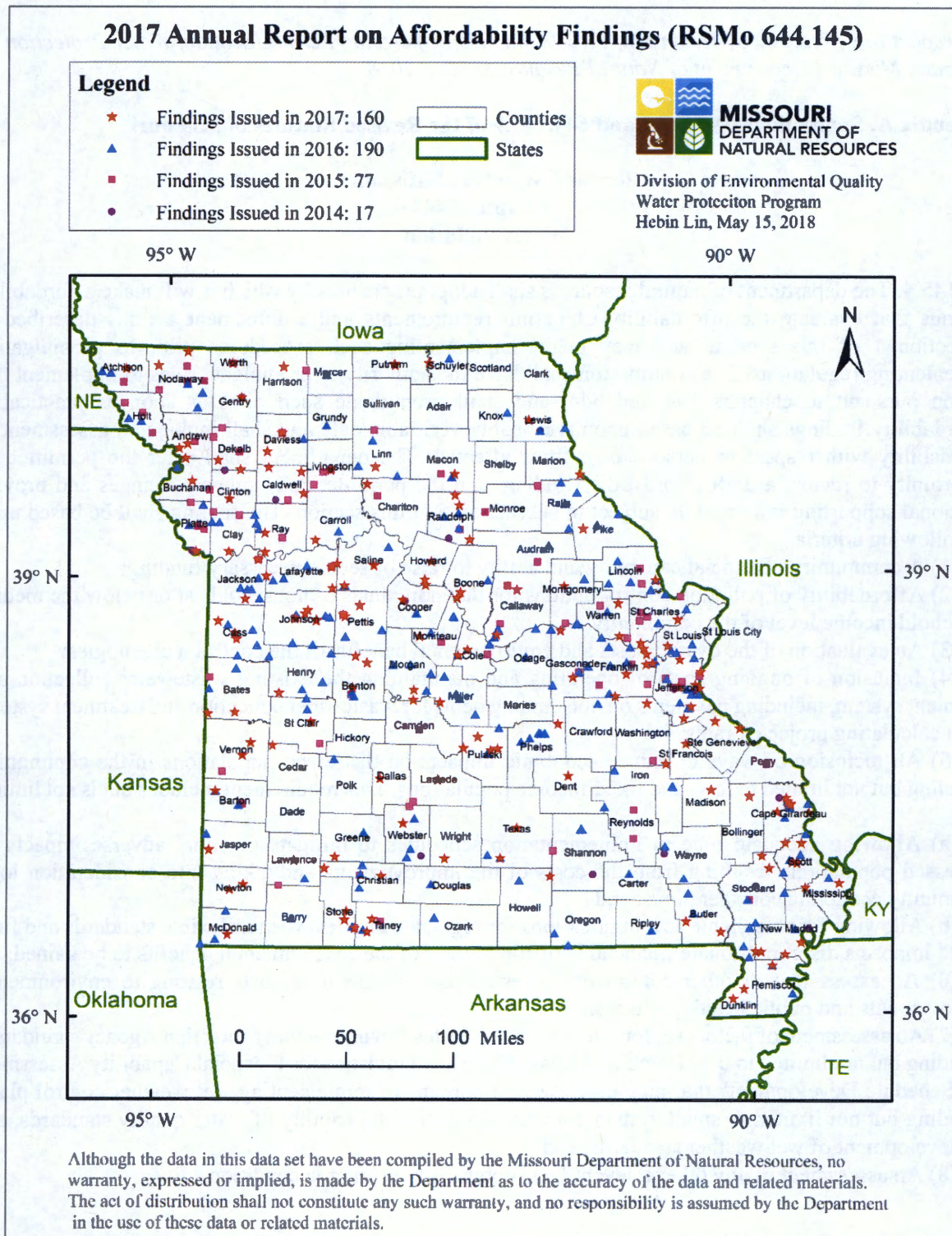
Livonia’s permit action resulted in an estimated \$2.81 increase in the projected monthly sewer rate to \$35.56, however this was deemed “affordable” because this sewer rate is based on the assumption that the facility will have to spend significant resources to upgrade. It appears likely that the facility will not have to upgrade after all, although the affordability analysis assumes this as a worst-case scenario. Based on reports submitted by Livonia to the department, the system has greatly improved its operational controls, particularly in the area of wastewater retention time such that the system has not discharged in several years. In comparison to some other systems that utilized similar retention times prior to discharge, it appears likely that Livonia’s system will provide sufficient treatment that it will meet the effluent limitations of the new permit that triggered the affordability analysis.

Breckenridge WWTF (MO-0093891, No. 008 in Table 1)

Breckenridge’s permit action resulted in an estimated \$3.01 increase in projected monthly sewer rate to \$43.01, however this was deemed “affordable” because there is a wide range of projected costs for the upgrade to land application and that the Department was not provided with any information regarding the City’s existing debt or operating costs. The department has provided an extension of the existing schedule of compliance by another five years to allow opportunity to evaluate additional mitigating paths such as the multiple discharger variance for ammonia.

2. Geographical Distribution: 2014-2017

The locations of the wastewater treatment facilities for which affordability findings have been conducted during calendar years 2014 through 2017 respectively are illustrated in Map 1 below.



Map 1. Locations of the Wastewater Treatment Facilities with Affordability Findings Issued in 2014 Through 2017

3. Conclusion

Based on the information and data collected, derived and examined, all the affordability findings issued by the Missouri Department of Natural Resources during calendar year 2017 met the criteria of affordable.

This report was prepared by Hebin Lin, PhD, Economist, Operating Permits Section, Water Protection Program, Missouri Department of Natural Resources, May, 2018.

Appendix A. Subsections 644.145.4 and 644.145.9 of the Revised Statutes of Missouri

Revised Statutes of Missouri Chapter 644 Water Pollution

644.145.4. The department of natural resources shall adopt procedures by which it will make affordability findings that evaluate the affordability of permit requirements and enforcement actions described in subsection 1 of this section, and may begin implementing such procedures prior to promulgating implementing regulations. The commission shall have the authority to promulgate rules to implement this section pursuant to chapters 536 and 644, and shall promulgate such rules as soon as practicable. Affordability findings shall be based upon reasonably verifiable data and shall include an assessment of affordability with respect to persons or entities affected. The department shall offer the permittee an opportunity to review a draft affordability finding, and the permittee may suggest changes and provide additional supporting information, subject to subsection 6 of this section. The finding shall be based upon the following criteria:

- (1) A community's financial capability and ability to raise or secure necessary funding;
- (2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;
- (3) An evaluation of the overall costs and environmental benefits of the control technologies;
- (4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates;
- (5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low- and fixed-income populations. This requirement includes but is not limited to:
 - (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations; and
 - (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained;
- (6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;
- (7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards; and
- (8) An assessment of any other relevant local community economic condition.

644.145.9. The department shall file an annual report by the beginning of the fiscal year with the governor, the speaker of the house of representatives, the president pro tempore of the senate, and the chairs of the committees in both houses having primary jurisdiction over natural resource issues showing at least the following information on the findings of affordability completed in the previous calendar year:

(1) The total number of findings of affordability issued by the department, those categorized as affordable, those categorized as not meeting the definition of affordable, and those implemented as a federal mandate regardless of affordability;

(2) The average increase in sewer rates both in dollars and percentage for all findings found to be affordable;

(3) The average increase in sewer rates as a percentage of median house income in the communities for those findings determined to be affordable and a separate calculation of average increases in sewer rates for those found not to meet the definition of affordable;

(4) A list of all the permit holders receiving findings, and for each permittee the following data taken from the finding of affordability shall be listed:

(a) Current and projected monthly residential sewer rates in dollars;

(b) Projected monthly residential sewer rates as a percentage of median household income;

(c) Percentage of households at or below the state poverty rate.

Appendix B. Overall Procedure for Making Affordability Findings

The Department conducts an affordability finding, or a Cost Analysis for Compliance (CAFCOM), as part of the renewal process for a National Pollutant Discharge and Elimination System (NPDES) permit, utilizing the following four primary tools and data sources:

(1) A Financial Questionnaire with a Community Supplemental Survey sent to permit holders categorized as a Publicly Owned Treatment Works (POTW) for collecting information on the sustainability and financial capability of the community; examples of information requested are the "current monthly residential sewer rates", and a primary socioeconomic indicator (Table 1), and "property tax collection rate in the municipality", a secondary socioeconomic indicator;

(2) The Affordability PreScreening Tool developed by the Department for compiling and analyzing socioeconomic data available from national, regional and local databases, including statistics from the U.S. Census Bureau; an example of data being "monthly median household income" (Table 1) and "percentage of households at or below poverty" (Table 1);

(3) A CAPDEWORKS Model developed by Hydromantis Environmental Software Solutions, Inc. for estimating the capital costs and operating and maintenance costs for different wastewater treatment technologies for compliance of upgrades so as to calculate the "projected monthly residential sewer rate" (Table 1);

(4) The Missouri Rural Population Sustainability Assessment Tool developed by the Environmental Finance Center at Wichita State University for assessing the potential of growth and sustainability of each rural community.

Once the draft NPDES permit is completed, the permit holder is given the opportunity to review and comment on the draft permit and the CAFCOM during the 10 day preview and 30 day public notice period. These review and comment periods offer permit holders an opportunity to provide additional information in regard to their community's unique financial situations before the final NPDES permit is issued. When the NPDES permit contains a Schedule of Compliance, during the 10 day preview, Department staff contact the permit holder via phone calls to ensure the permit holder has received and understood the draft permit and the CAFCOM.